CLAIMS:

1. A power transmission fluid composition, comprising:

(a) a base oil, and

(b) an additive composition comprising a viscosity index improving amount of a polyisoalkylene component having a molecular weight ranging from about 300 to about 10,000 weight average molecular weight as determined by gel permeation chromatography,

wherein the power transmission fluid exhibits a kinematic viscosity (KV at 100°C) of less than about 9 centistokes and a Brookfield viscosity (BV at -40°C) of less than about 30,000 centipoise, and wherein a friction versus velocity curve for the fluid has a more positive slope at high speeds compared to similar fluids in the absence of the polyisoalkylene component.

2. The fluid of claim 1, wherein the base oil comprises one or more of a natural oil, a mixture of natural oils, a synthetic oil, a mixture of synthetic oils, and a mixture of natural and synthetic oils.

3. The fluid of claim 2, wherein the natural oil comprises one or more of a mineral oil, a vegetable oil, and a mixture of mineral oil and vegetable oil.

4. The fluid of claim 2, wherein the synthetic oil is comprises one or more of an oligomer of an alphaolefin, an ester, an oil derived from a Fischer-Tropsch process, a gas-to-liquid stock, and a mixture thereof.

5. The fluid of claim 1, wherein the base oil comprises a kinematic viscosity of from about 2 centistokes to about 10 centistokes at 100° C.

6. The fluid of claim 1, wherein the polyisoalkylene comprises polyisobutylene having a weight average molecular weight ranging from about 500 to about 3000.

7. The fluid of claim 6, wherein the polyisobutylene is hydrogenated.

8. The fluid of claim 1, wherein the additive composition comprises from about 10 wt% to about 90 wt% polyisoalkylene component.

9. The fluid of claim 1, wherein the additive composition further comprises one or more viscosity index improver components selected from the group consisting of polymethacrylates, olefin copolymers, and styrene-maleic esters.

10. The fluid of claim 1, wherein the additive composition further comprises one or more of an ashless dispersant, an antioxidant, an antiwear agent, a friction modifier, an antifoam agent, and a corrosion inhibitor.

11. The fluid of claim 10, wherein the ashless dispersant is comprises one or more of hydrocarbyl succinimides, hydrocarbyl succinamides, polyol esters, mixed ester/amides of hydrocarbyl substituted succinic acid, and Mannich condensation products of hydrocarbyl-substituted phenols, formaldehyde and polyamines.

12. The fluid of claim 10, wherein the friction modifier comprises one or more of aliphatic fatty amines, ether amines, alkyoxylated aliphatic fatty amines, alkoxylated ether amines, oil-soluble aliphatic carboxylic acids, polyol esters, fatty acid amides, acylated amines, imidazolines, tertiary amines, and hydrocarbyl succinimides reacted with ammonia or a primary amine.

13. The fluid of claim 10, wherein the antioxidant comprises one or more of bis-alkylated diphenyl amines, phenyl alpha or beta napthyl amines, sterically hindered phenols, bisphenols, and cinnamic acid derivatives.

14. The fluid of claim 10, wherein the antiwear agent comprises one or more of phosphate esters and salts thereof, phosphite esters and salts thereof, dialkyldithiophosphoric acid esters and salts thereof, phosphoric acids, and phosphorus acids.

15. The fluid of claim 10, wherein the antifoam agent comprises one or more of silicones and polyacrylates.

16. The fluid of claim 1, wherein the fluid is suitable for use in comprises one or more of a transmission employing one or more of a slipping torque converter, a lock-up torque converter, a starting clutch, and one or more shifting clutches.

17. The fluid of claim 1, wherein the fluid is suitable for use in comprises one or more of a belt, chain, and disk-type continuously variable transmission.

18. An automatic transmission containing the fluid of claim 1.

19. The automatic transmission of claim 18, wherein the automatic transmission comprises a constantly variable transmission.

20. The automatic transmission of claim 18, wherein the transmission comprises a carbon fiber friction plate.

21. A method of improving shear stability for a transmission fluid comprising:

providing a base oil; and

adding to the base oil an additive composition comprising from about 10 to about 90 wt% of a polyisoalkylene component having a molecular weight ranging from about 300 to about 10,000 weight average molecular weight as determined by gel permeation chromatography, wherein the base oil containing the additive composition exhibits a kinematic viscosity (KV at 100°C) of less than about 9 centistokes and a Brookfield viscosity (BV at -40°C) of less than about 30,000 centipoise, and wherein a friction versus velocity curve for the oil and additive composition has a more positive slope at high speeds compared to similar fluids in the absence of the polyisoalkylene component.

22. The method of claim 21, wherein the base oil comprises one or more of a natural oil, a mixture of natural oils, a synthetic oil, a mixture of synthetic oils, and a mixture of natural and synthetic oils.

23. The method of claim 22, wherein the natural oil comprises one or more of a mineral oil, a vegetable oil, and a mixture of mineral oil and vegetable oil.

24. The method of claim 22, wherein the synthetic oil comprises one or more of an oligomer of an alphaolefin, an ester, an oil derived from a Fischer-Tropsch process, a gas-to-liquid stock, and a mixture thereof.

25. The method of claim 21, wherein the base oil comprises a kinematic viscosity of from about 2 centistokes to about 10 centistokes at 100° C.

26. The method of claim 21, wherein the polyisoalkylene comprises polyisobutylene having a weight average molecular weight ranging from about 500 to about 3000.

27. The method of claim 26, wherein the polyisobutylene is hydrogenated.

28. The method of claim 21, wherein the additive composition comprises from about 20 wt% to about 90 wt% polyisoalkylene component.

29. The method of claim 21, wherein the additive further comprises one or more viscosity index improver components selected from the group consisting of polymethacrylates, olefin copolymers, and styrene-maleic esters.

30. The method of claim 21, wherein the additive composition further comprises one or more of an ashless dispersant, an antioxidant, an antiwear agent, a friction modifier, an antifoam agent, and a corrosion inhibitor.

31. The method of claim 30, wherein the ashless dispersant comprises one or more of hydrocarbyl succinimides, hydrocarbyl succinamides, polyol esters, mixed ester/amides of hydrocarbyl substituted succinic acid, and Mannich condensation products of hydrocarbyl-substituted phenols, formaldehyde, and polyamines.

32. The method of claim 30, wherein the friction modifier comprises one or more of aliphatic fatty amines, ether amines, alkyoxylated aliphatic fatty amines, alkoxylated ether amines, oil-soluble aliphatic carboxylic acids, polyol esters, fatty acid amides,

acylated amines, imidazolines, tertiary amines, and hydrocarbyl succinimides reacted with ammonia or a primary amine.

33. The method of claim 30, wherein the antioxidant comprises one or more of bis-alkylated diphenyl amines, phenyl alpha or beta napthyl amines, sterically hindered phenols, bisphenols, and cinnamic acid derivatives.

34. The method of claim 30, wherein the antiwear agent comprises one or more of phosphate esters and salts thereof, phosphite esters and salts thereof, dialkyldithiophosphoric acid esters and salts thereof, phosphoric acids, and phosphorus acids.

35. The method of claim 30, wherein the antifoam agent comprises one or more of silicones and polyacrylates.

36. The method of claim 21, wherein the fluid is suitable for use in a transmission employing one or more of a slipping torque converter, a lock-up torque converter, a starting clutch, and one or more shifting clutches.

37. The method of claim 31, wherein the fluid is suitable for use in a belt, chain, or disk-type continuously variable transmission.

38. An additive concentrate for a transmission fluid, the additive concentrate comprising:

at least a first thickening agent comprising a polyisoalkylene having a molecular weight ranging from about 500 to about 10,000 weight average molecular weight as determined by gel permeation chromatography,

a second thickening agent comprising one or more of polymethacrylates, olefin copolymers, and styrene-maleic esters,

wherein a total amount of the first and second viscosity index improvers present in the additive concentrate ranges from about 10 wt% to about 90 wt% and the additive concentrate further comprises from about 5 wt% to about 25 wt% base oil, and wherein a power transmission fluid containing from about 1 to about 30 wt% of the additive

concentrate exhibits a kinematic viscosity (KV at 100°C) of less than about 9 centistokes and a Brookfield viscosity (BV at -40°C) of less than about 30,000 centipoise, and wherein a friction versus velocity curve for the fluid has a more positive slope at high speeds compared to similar fluids in the absence of the polyisoalkylene component.

39. The additive concentrate of claim 38, wherein the polyisoalkylene comprises polyisobutylene having a weight average molecular weight ranging from about 500 to about 3000.

40. The additive concentrate of claim 39, wherein the polyisobutylene is hydrogenated.

41. The additive concentrate of claim 38, wherein the additive concentrate comprises from about 20 wt% to about 90 wt% polyisoalkylene component.

42. The additive concentrate of claim 38, further comprising one or more of an ashless dispersant, an antioxidant, an antiwear agent, a friction modifier, an antifoam agent, and a corrosion inhibitor.

43. The additive concentrate of claim 42, wherein the ashless dispersant comprises one or more of hydrocarbyl succinimides, hydrocarbyl succinamides, polyol esters, mixed ester/amides of hydrocarbyl substituted succinic acid, and Mannich condensation products of hydrocarbyl-substituted phenols, formaldehyde, and polyamines.

44. The additive concentrate of claim 42, wherein the friction modifier comprises one or more of aliphatic fatty amines, ether amines, alkyoxylated aliphatic fatty amines, alkoxylated ether amines, oil-soluble aliphatic carboxylic acids, polyol esters, fatty acid amides, imidazolines, tertiary amines, and hydrocarbyl succinimides reacted with ammonia or a primary amine.

45. The additive concentrate of claim 42, wherein the antioxidant comprises one or more of bis-alkylated diphenyl amines, phenyl alpha or beta napthyl amines, sterically hindered phenols, bisphenols, and cinnamic acid derivatives.

46. The additive concentrate of claim 42, wherein the antiwear agent comprises one or more of phosphate esters and salts thereof, phosphite esters and salts thereof, and dialkyldithiophosphoric acid esters and salts thereof.

47. The additive concentrate of claim 42, wherein the antifoam agent comprises one or more of silicones and polyacrylates.

48. An automatic transmission fluid comprising a base oil and the additive concentrate of claim 38, wherein the additive concentrate is present in an amount of about 5 wt% to about 50 wt% in the fluid.

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49. A vehicle comprising an engine and a transmission, the transmission including the automatic transmission fluid of claim 48.

50. The vehicle of claim 49 wherein the automatic transmission comprises a carbon fiber containing friction plate.